outer side wall radially integrated along an upstream side of the aperture and a downstream side of the aperture respectively with respect to a rotation direction of the rotor disk, and wherein the inner side wall and the outer side wall radially extend upward from the floor plate.

6. The gas turbine engine as claimed in claim **5**, wherein the inner side wall and the outer side wall comprise curved plates, and wherein the curved inner side wall and the curved outer side wall are configured to form a cooling fluid inlet facing to the rotation direction of the rotor disk.

7. The gas turbine engine as claimed in claim **1**, wherein the lower seal plate wall comprises a root extending radially downward, and wherein the root is configured to be displaced into the disk groove after assembly.

8. The gas turbine engine as claimed in claim **7**, wherein the flow inducer assembly is integrated to the root at a side facing away from the rotor disk and axially extends out from the root.

9. The gas turbine engine as claimed in claim **8**, wherein the flow inducer assembly comprises a curved plate, and wherein the curved plate is configured to radially along the disk cavity at a downstream side with respect to a rotation direction of the rotor disk after attached to the rotor disk.

10. The gas turbine engine as claimed in claim **1**, wherein the cooling fluid comprises ambient air.

11. A seal plate configured to be attached to a rotor disk of a gas turbine engine, wherein the gas turbine engine comprises a rotor disk comprising a plurality of circumferentially distributed disk grooves, wherein each disk groove comprises a blade mounting section and a disk cavity, wherein each turbine blade comprises a blade root that is inserted into the blade mounting section of the disk groove, and wherein the seal plate is attached to aft side of the rotor disk, the seal plate comprising:

an upper seal plate wall configured to cover the blade root;

a lower seal plate wall; and

a flow inducer assembly integrated to the seal plate at a side facing away from the rotor disk,

wherein the flow inducer assembly is configured to function as a paddle due to rotation of the rotor disk and the seal plate therewith during operation of the gas turbine engine to induce a cooling fluid into the disk cavity and enter inside of the turbine blade from blade root for cooling the turbine blade.

12. The seal plate as claimed in claim **11**, wherein the lower seal plate wall comprises an aperture, and wherein the aperture is configured to align with the disk cavity after attached to the rotor disk.

13. The seal plate as claimed in claim **12**, wherein the flow inducer assembly comprises a curved plate, wherein the curved plate is integrated to the lower seal plate wall and axially extends out from the lower seal plate wall, and wherein the curved plate is configured to along a downstream side of the aperture with respect to a rotation direction of the rotor disk.

14. The seal plate as claimed in claim **13**, wherein the curved plate comprises a scoop shape.

15. The seal plate as claimed in claim **11**, wherein the flow inducer assembly comprises a floor plate axially extending from the lower seal plate wall at a radial location at least of the lowest radial point of the aperture, wherein the flow inducer assembly comprises an inner side wall and an outer side wall radially integrated along an upstream side of the aperture and a downstream side of the aperture respectively with respect to a rotation direction of the rotor disk, and wherein the inner side wall and the outer side wall radially extend upward from the floor plate.

16. The seal plate as claimed in claim **15**, wherein the inner side wall and the outer side wall comprise curved plates, and wherein the curved inner side wall and the curved outer side wall are configured to form a cooling fluid inlet facing to the rotation direction of the rotor disk.

17. The seal plate as claimed in claim **11**, wherein the lower seal plate wall comprises a root extending radially downward, and wherein the root is configured to be displaced into the disk groove after assembly.

18. The seal plate as claimed in claim **17**, wherein the flow inducer assembly is integrated to the root at a side facing away from the rotor disk and axially extends out from the root.

19. The seal plate as claimed in claim **18**, wherein the flow inducer assembly comprises a curved plate, and wherein the curved plate is configured to radially along the disk cavity at a downstream side with respect to a rotation direction of the rotor disk after attached to the rotor disk.

20. A method for cooling turbine blades of a gas turbine engine, wherein the gas turbine engine comprises a rotor disk comprising a plurality of circumferentially distributed disk grooves, wherein each disk groove comprises a blade mounting section and a disk cavity, wherein each turbine blade comprises a blade root that is inserted into the blade mounting section of the disk groove, the method comprising:

attaching a plurality of seal plates to aft side circumference of the rotor disk, wherein each seal plate comprises an upper seal plate wall and a lower seal plate wall, wherein the upper seal plate wall is configured to cover the blade root; and

attaching a plurality of flow inducer assemblies to the seal plates, wherein each flow inducer assembly is integrated to each seal plate at a side facing away from the rotor disk,

wherein the flow inducer assembly is configured to function as a paddle due to rotation of the rotor disk and the seal plate therewith during operation of the gas turbine engine to induce a cooling fluid into the disk cavity and enter inside of the turbine blade from blade root for cooling the turbine blade.

* * * * *